# Wetland Report for FAP 827 (Illinois Route 15), new Crossing of the Wabash River, Wabash County, Illinois and Gibson County, Indiana

David Ketzner, Dennis Keene, Brian Wilm, Rick Larimore and Brad Zercher
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, IL 61820
217-244-8821 (Ketzner)

## Introduction and Project Summary

The following sources were examined while surveying the project area to determine wetland locations and boundaries: United States Geological Survey topographic maps and National Wetland Inventory (NWI) maps (Mount Carmel and East Mount Carmel Quadrangles, 7.5 Minute Series); an aerial photograph; Reed (1988); Walker and Fehrenbacher (1964); and Environmental Laboratory (1987). These materials were used during an on-site evaluation of vegetation, soils, and hydrology.

All potential wetlands within the project corridor were examined. Twenty-four routine on-site wetland determinations were performed. Fifteen of these sites met all wetland criteria, and therefore, were determined to be wetlands. Two additional cropped sites may be wetlands. At this time, the final determinations for these cropped sites remain unknown, pending determinations from the Natural Resources Conservation Service. Personnel from the local NRCS office were unable to supply determinations for these two sites. If this information is needed, formal requests for determinations through the local NRCS office will be necessary. Results of all determinations are summarized below and are described in more detail on the accompanying forms (Appendix 1). The wetland delineation sites are marked on Figures 1-4. Figure 1 is included as a separate large photograph.

Included with the assessment of a site is its Floristic Quality Index (Taft *et al.* 1997). Although the Index is not a substitute for quantitative vegetation analysis in assessing plant communities, it provides a measure of the floristic integrity or level of disturbance of a site. Each plant species is assigned a rating between 0 and 10 (the Coefficient of Conservatism) that is a subjective indicator of how likely a plant may be found on an undisturbed site in a natural plant community. A plant species that has a low Coefficient of Conservatism (C) is common and is likely to tolerate disturbed conditions; a species with a high C is relatively rare and is likely to require specific, undisturbed habitats. Plants not identified to species level are not rated and are not included in the calculations.

The Floristic Quality Index (FQI) is calculated as follows: $FQI = R/\sqrt{N}$, where R represents the sum of the numerical ratings (C) for all species recorded for a site, and N represents the number of plants on the site. The mean C value (also known as mean rated quality) was also determined for each site. This value is calculated as follows: $mCv = R/N$. The C value for each species is shown in the species list for the site. Species not native to Illinois or Indiana (indicated by ** in the species list for each site) are not included in calculations. An Index score below 10 suggests a site of low natural quality; below five, a highly disturbed site. An FQI value of 20 or more suggests that a site has evidence of native character and may be considered an environmental asset.

Since the initial development of the Floristic Quality Index for the Chicago Region, the method has been adapted to other areas, including the entire state of Illinois and Indiana. Some adaptation is necessary, because Coefficients of Conservatism assigned to species need to reflect their observed behavior in the particular region in question, and the values can vary over large geographic areas. Since this project includes wetland sites in both Illinois and Indiana, two separate lists of C values were used in order to account for regional differences in species behavior between the two states. Taft *et al.* (1997) was used for wetland sites in Illinois, while Rothrock (2004) was used for wetland sites in Indiana. Coefficients of Conservatism can vary considerably between the two lists. Although the C values from Rothrock (2004) were used for plants found in Indiana, for conformity botanical nomenclature follows Taft *et al.* (1997) in the species list for each wetland site, for Indiana as well as Illinois.

Several plant species of special concern in Indiana were found within the project corridor (Indiana Department of Natural Resources 1996). Catalpa (*Catalpa speciosa*) was found at three wetland sites (14, 20 and 23), as well as two non-wetland areas within the project corridor. Catalpa is listed as rare (S2, imperiled in state) in Indiana. Green hawthorn (*Crataegus viridis*) was found in two wetland sites (7 and 14), as well as one non-wetland site within the project corridor. This small tree is listed as state threatened (S2, imperiled in state) in Indiana. Short-point flatsedge (*Cyperus acuminatus*) was found at two wetland sites (12 and 21). This inconspicuous species is listed as state endangered (S1, critically imperiled in state) in Indiana. Numerous plants of large buttonweed (*Diodia virginiana*) were found at one wetland site (22). This species is listed as state threatened (S2, imperiled in state) in Indiana. No plants of special concern were found within the project corridor in Illinois.

## Wetland Site Summaries

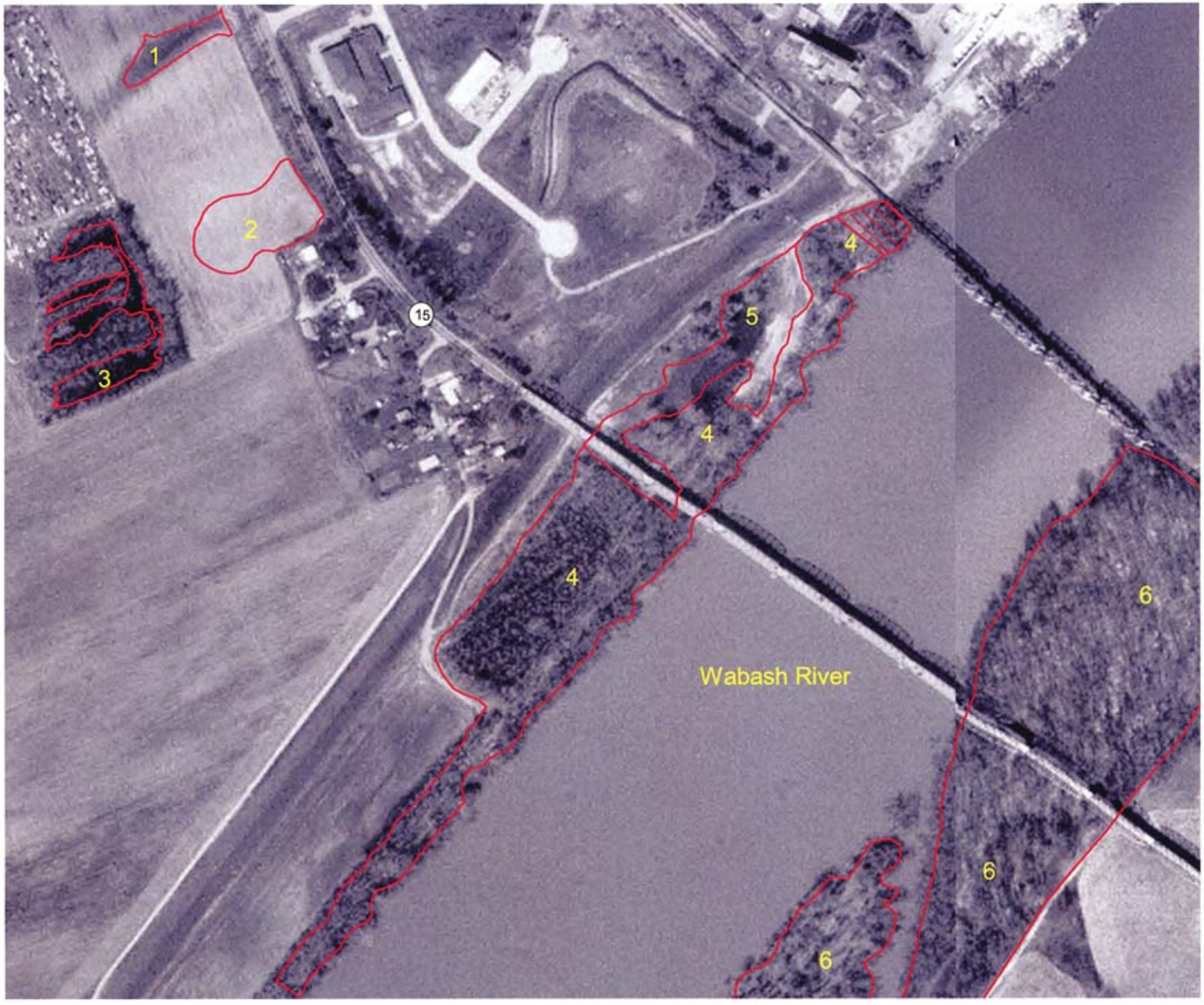
Site 1: This wet meadow is located approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River (Figures 1 and 2). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.2 ha (0.6 acre) in size and is entirely within the project corridor. This wet meadow provides floodwater storage and wildlife habitat of fairly good quality, and traps sediment originating from the adjacent agricultural field. The National Wetlands Inventory (NWI) does not code this site as a wetland. The FQI for the site is 17.7 and the mean C value is 2.3. These values are indicative of fair natural quality. This narrow site is surrounded on three sides by cropland.

Site 2: This farmed wetland is located approximately 18.3 m (60 ft) southwest of FAP 827 and 427 m (1400 ft) northwest of the Wabash River (Figures 1 and 2). This cropped site is coded as Farmed Wetland by the Natural Resources Conservation Service. Hydric soils and wetland hydrology are present, but dominant hydrophytic vegetation is absent under the current management conditions. This site is approximately 0.6 ha (1.6 acre) in size and is entirely within the project corridor. This farmed wetland provides floodwater storage. The NWI codes this site as PEMAf (farmed, temporarily flooded, emergent palustrine wetland). The FQI and the mean C value were not determined because no natural vegetation occurs on this site. The entire site was planted in corn on the day of the field survey.

Site 3: This pond is located approximately 183 m (600 ft) southwest of FAP 827 and 457 m (1500 ft) northwest of the Wabash River (Figures 1 and 2). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.6 ha (1.4 acre) in size and is entirely within the project corridor. This pond provides floodwater storage and wildlife habitat of fair quality. The NWI does not code this site as a wetland. The FQI for the site is 7.9 and the mean C value is 2.5. These values are indicative of poor natural quality. This excavated pond is located

FAP 827 (IL 15) Wabash River Bridge, Wabash County

figure 2




Non-wetland site
Unknown site
Wetland site not in project boundary
Wetland site

N
W
E
S

scale 1:4800
1 inch=400 ft

0 400 800 Feet

0 100 200 Meters

FAP 827 (IL 15) Wabash River Bridge, Wabash County

figure 3


0 400 800 Feet

0 100 200 Meters

- Non-wetland site
- Unknown site
- Wetland site not in project boundary
- Wetland site

N
W E
S

scale 1:4800
1 inch=400 ft

FAP 827 (IL 15) Wabash River Bridge, Wabash County

figure 4


0 400 800 Feet

0 100 200 Meters

Non-wetland site
Unknown site
Wetland site not in project boundary
Wetland site

N
W E
S

scale 1:4800
1 inch=400 ft

within a forested area of poor quality. Debris from the adjacent junkyard is present in both the pond and the surrounding forest.

Site 4: This wet floodplain forest is located immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River (Figures 1 and 2). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 4.9 ha (12.2 acres) in size within the project corridor and extends outside of the corridor an undetermined distance. This wet floodplain forest provides floodwater storage, stream bank stabilization, and wildlife habitat of fairly good quality. The NWI codes this site as PEM/FO1A (temporarily flooded, emergent/broad-leaved deciduous, forested palustrine wetland) and PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 17.6 and the mean C value is 2.3. These values are indicative of fair natural quality.

Site 5: This wet meadow is located immediately beneath to northeast of the existing bridge on FAP 827, 24 m (80 ft) northwest of the Wabash River (Figures 1 and 2). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 1.2 ha (3.0 acres) in size and is entirely within the project corridor. This wet meadow provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEM/FO1A (temporarily flooded, emergent/broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 8.9 and the mean C value is 1.7. These values are indicative of poor natural quality. This site is dominated by herbaceous species, although a few scattered trees are present.

Site 6: This wet floodplain forest is located immediately northeast and southwest of Indiana Route 64, directly adjacent to the Wabash River (Figures 1 and 3). Included within this site is the north part of Patoka Island. Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 13.9 ha (34.3 acres) in size within the project corridor and extends outside of the corridor an undetermined distance. This wet floodplain forest provides floodwater storage, stream bank stabilization, and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 19.7 and the mean C value is 2.9. These values are indicative of fair natural quality.

Site 7: This wet floodplain forest is located approximately 21.3 m (70 ft) northeast of Indiana Route 64 and 353 m (1160 ft) southeast of the Wabash River (Figures 1 and 3). This site includes two distinct areas, separated by Site 8. Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 1.2 ha (3.1 acres) in size and is entirely within the project corridor. The west section of this site is approximately 0.9 ha (2.3 acres) in size, and the east section is 0.3 ha (0.7 acre) in size. This wet floodplain forest provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 18.1 and the mean C value is 2.7. These values are indicative of fair natural quality. A single individual of green hawthorn (*Crataegus viridis*) was found in the west section of this site. This small tree is listed as state threatened (S2, imperiled in state) in Indiana.

Site 8: This wet meadow is located approximately 54.9 m (180 ft) northeast of Indiana Route 64 and 500 m (1640 ft) southeast of the Wabash River (Figures 1 and 3). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.2 ha (0.5 acre) in size and is entirely within the project corridor. This wet meadow provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PUBG (intermittently exposed, palustrine

wetland with an unconsolidated bottom). The FQI for the site is 7.8 and the mean C value is 2.3. These values are indicative of poor natural quality. This site of low diversity is beneath a power line and its vegetation probably is periodically treated with herbicide.

Site 9: This pond is located immediately north and south (and directly under a bridge) of Indiana Route 64 and 567 m (1860 ft) southeast of the Wabash River (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 2.6 ha (6.3 acres) in size, with approximately 1.7 ha (4.2 acres) within the project corridor. This pond provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PUBG (intermittently exposed, palustrine wetland with an unconsolidated bottom). The FQI for the site is 10.4 and the mean C value is 2.5. These values are indicative of fair natural quality. This excavated pond probably is permanently inundated. Although much open water is present, a zone of buttonbush (*Cephalanthus occidentalis*) is present around the perimeter, at least on the west side of the pond.

Site 10: This floodplain forest is located approximately 18.3 m (60 ft) northeast of Indiana Route 64 and 610 m (2000 ft) southeast of the Wabash River (Figures 1 and 4). Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Therefore, we determined that this site is not a wetland. This floodplain forest provides floodwater storage (of short duration only) and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland). The FQI for the site is 21.0 and the mean C value is 3.1. These values are indicative of good natural quality, and this site can be considered an environmental asset.

Site 11: This cropland is located approximately 4.6 m (15 ft) north of 970 W and 232 m (760 ft) southwest of Indiana Route 64 (Figures 1 and 4). The final determination for this cropped site remains unknown, pending a determination from the Natural Resources Conservation Service. Personnel from the local NRCS office were unable to supply a determination at this time. Although dominant hydrophytic vegetation is present and wetland hydrology may be present, we were unable to find indicators of hydric soils. However, we nevertheless believe that this site is probably a wetland. This cropland provides floodwater storage and wildlife habitat of poor quality. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland). The FQI for the site is 4.4 and the mean C value is 1.4. These values are indicative of very poor natural quality. This cropped site was recently treated with herbicide. Most of the plants, although readily identifiable, had recently died. Although very few live plants were present at the time of the field survey, we were able to determine that the vegetation was hydrophytic before herbicide treatment.

Site 12: This cropland is located approximately 5.5 m (18 ft) south of 970 W and 305 m (1000 ft) southwest of Indiana Route 64 (Figures 1 and 4). The final determination for this cropped site remains unknown, pending a determination from the Natural Resources Conservation Service. Personnel from the local NRCS office were unable to supply a determination at this time. Although dominant hydrophytic vegetation is present and wetland hydrology may be present, we were unable to find indicators of hydric soils. However, we nevertheless believe that this site is probably a wetland. This cropland provides floodwater storage and wildlife habitat of poor quality. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland). The FQI for the site is 5.9 and the mean C value is 1.2. These values are indicative of poor natural quality. Short-point flatsedge (*Cyperus acuminatus*) was found at this site. This inconspicuous species is listed as state endangered (S1, critically imperiled in state) in Indiana.

Site 13: This floodplain forest is located approximately 12.2 m (40 ft) southwest of Indiana Route 64 and 323 m (1060 ft) southeast of the Wabash River (Figures 1 and 4). Dominant

hydrophytic vegetation, hydric soils, and wetland hydrology are all absent. This site meets none of the wetland criteria, and therefore, we determined that it is not a wetland. This floodplain forest provides floodwater storage (of short duration only) and wildlife habitat of poor quality. The NWI does not code this site as a wetland. The FQI for the site is 12.6 and the mean C value is 2.3. These values are indicative of fair natural quality. This site is partially covered with fill material.

Site 14: This wet floodplain forest is located approximately 4.6 m (15 ft) east of 970 W and 24.4 m (80 ft) southwest of Indiana Route 64 (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.7 ha (1.7 acres) in size and is entirely within the project corridor. This wet floodplain forest provides floodwater storage and wildlife habitat of good quality. The NWI does not code this site as a wetland. The FQI for the site is 19.7 and the mean C value is 2.9. These values are indicative of fair natural quality. A single individual of green hawthorn (*Crataegus viridis*) was found at this site. This small tree is listed as state threatened (S2, imperiled in state) in Indiana. A single catalpa (*Catalpa speciosa*), approximately 0.8 m (2.5 ft) tall, was also found at this site. Catalpa is listed as rare (S2, imperiled in state) in Indiana.

Site 15: This wet floodplain forest is located approximately 30.5 m (100 ft) south of 970 W and 128 m (420 ft) southwest of Indiana Route 64 (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This excavated site is approximately 3.5 ha (8.6 acres) in size, with approximately 2.0 ha (4.9 acres) within the project corridor. This wet floodplain forest provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland) and PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom). The FQI for the site is 13.5 and the mean C value is 2.5. These values are indicative of fair natural quality.

Site 16: This floodplain forest is located approximately 12.2 m (40 ft) northeast of Indiana Route 64 and 549 m (1800 ft) southeast of the Wabash River (Figures 1 and 4). Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Therefore, we determined that this site is not a wetland. This floodplain forest provides floodwater storage (of short duration only) and wildlife habitat of fair quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 23.0 and the mean C value is 3.3. These values are indicative of good natural quality, and this site can be considered an environmental asset. This site is a narrow strip of forest between a crop field and a pond (Site 9). Several of the trees are quite large, and are probably more than 75 years old.

Site 17: This floodplain forest is located approximately 3.0 m (10 ft) south of 970 W and 171 m (560 ft) northwest of Maucks Pond (Figures 1 and 4). Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Therefore, we determined that this site is not a wetland. This floodplain forest provides floodwater storage (of short duration only) and wildlife habitat of fair quality. The NWI does not code this site as a wetland. The FQI for the site is 16.7 and the mean C value is 2.9. These values are indicative of fair natural quality.

Site 18: This wet floodplain forest is located approximately 140 m (460 ft) northeast of Indiana Route 64 and 646 m (2120 ft) southeast of the Wabash River (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.07 ha (0.2 acre) in size and is entirely within the project corridor. This wet floodplain forest provides floodwater storage

and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland). The FQI for the site is 15.7 and the mean C value is 3.5. These values are indicative of fair natural quality.

Site 19: This wet floodplain forest is located approximately 162 m (530 ft) northeast of Indiana Route 64 and 723 m (2400 ft) southeast of the Wabash River (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.06 ha (0.16 acre) in size, with approximately 0.05 ha (0.13 acre) within the project corridor. This wet floodplain forest provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland). The FQI for the site is 17.4 and the mean C value is 3.5. These values are indicative of fair natural quality.

Site 20: This floodplain forest is located approximately 250 m (820 ft) southwest of Indiana Route 64 and 12.2 m (40 ft) west of Maucks Pond (Figures 1 and 4). Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Therefore, we determined that this site is not a wetland. This floodplain forest provides floodwater storage (of short duration only) and wildlife habitat of good quality. The NWI codes this site as PSS1A (temporarily flooded, broad-leaved deciduous, scrub-shrub palustrine wetland). The FQI for the site is 21.3 and the mean C value is 3.0. These values are indicative of good natural quality, and this site can be considered an environmental asset. This site is barely within the project corridor, and it seems unlikely that it will be impacted by the proposed construction activities. A wetland occurs to the south of this site, just outside of the project corridor. At least twenty individuals of catalpa (*Catalpa speciosa*) occur at this site, within the project corridor. More plants are probably present outside of the project corridor. Catalpa is listed as rare (S2, imperiled in state) in Indiana.

Site 21: This site is Maucks Pond, located approximately 168 m (550 ft) southwest of Indiana Route 64 and 9.1 m (30 ft) west of 950 W (Figures 1 and 4). This excavated pond is a deepwater aquatic habitat. Although this permanently inundated area is probably less than 6.6 ft mean annual depth, dominant hydrophytic vegetation and soils which support rooted emergent or woody plants are not present. Therefore, we determined that this site is not a wetland. This pond provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as L1UBH (permanently flooded, limnetic, lacustrine system with an unconsolidated bottom). The FQI for the site is 12.8 and the mean C value is 2.4. These values are indicative of fair natural quality. Short-point flatsedge (*Cyperus acuminatus*) was found at this site. This species is listed as state endangered (S1, critically imperiled in state) in Indiana. Two individuals of catalpa (*Catalpa speciosa*) occur along the east shore, outside of the wetland site, but within the project corridor. Catalpa is listed as rare (S2, imperiled in state) in Indiana. In addition, a single shrub of green hawthorn (*Crataegus viridis*) was found near this pond, outside of the wetland site, but within the project corridor. Green hawthorn is listed as state threatened (S2, imperiled in state) in Indiana.

Site 22: This wet meadow is located approximately 21.3 m (70 ft) southwest of Indiana Route 64 and 36.6 m (120 ft) west of 950 W (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.5 ha (1.2 acre) in size and is entirely within the project corridor. This wet meadow provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland). The FQI for the site is 21.0 and the mean C value is 2.8. These values are indicative of good natural quality, and this site can be considered an environmental asset. Numerous plants of large buttonweed (*Diodia virginiana*) were found at this site. This species is listed as state

threatened (S2, imperiled in state) in Indiana. The plants form mats along the levee at the margin of the wetland.

Site 23: This wet floodplain forest is located approximately 13.7 m (45 ft) northeast of Indiana Route 64 and 9.1 m (30 ft) east of 950 W (Figures 1 and 4). Based on the presence of dominant hydrophytic vegetation, hydric soils and wetland hydrology, we determined that this site is a wetland. This site is approximately 0.6 ha (1.4 acre) in size and is entirely within the project corridor. This wet floodplain forest provides floodwater storage and wildlife habitat of good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland). The FQI for the site is 18.0 and the mean C value is 3.1. These values are indicative of fair natural quality. Two individuals of catalpa (*Catalpa speciosa*) were found at this site. Both were trees of reproductive size. Several more were found just outside the boundaries of this site, but still within the project corridor. Catalpa is listed as rare (S2, imperiled in state) in Indiana.

Site 24: This pond is located approximately 41.1 m (135 ft) northeast of Indiana Route 64 and 152 m (500 ft) east of 950 W (Figures 1 and 4). This excavated site is a deepwater aquatic habitat that is permanently inundated at mean water depths of > 6.6 feet. Dominant hydrophytic vegetation and soils which support rooted emergent or woody plants are not present. Therefore, we determined that this site is not a wetland. This pond provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom). The FQI for the site is 9.0 and the mean C value is 1.8. These values are indicative of poor natural quality.

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# Appendix 1

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 1 (page 1 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, NE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Boltonia asteroides* | FACW | herb |
| 2. *Echinochloa muricata* | OBL | herb |
| 3. *Glyceria striata* | OBL | herb |
| 4. *Iva annua* | FAC | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Wabash County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 10YR 5/1
Other indicators: This soil is found in a depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, an iron depleted matrix, and is found in a low-lying area. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 1 (page 2 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, NE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River

### HYDROLOGY

Inundated? Yes: X (in part) No: Depth of standing water: to 0.1 m (4 in)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from higher ground, and from overflow of an adjacent ditch. Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee. Water leaves the site via evapotranspiration.

Size of watershed: $< 2.6$ km$^2$ (1 mi$^2$)
Other field evidence observed: This site is lower than surrounding ground. Water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation, the relatively low topography, and other field evidence indicate that wetland hydrology is present. The adjacent ditch does not appear to effectively drain this site. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI does not code this site as a wetland.

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 1 (page 3 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, NE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer negundo* | box elder | shrub | FACW- | 1 |
| *Acer saccharinum* | silver maple | sapling, shrub | FACW | 1 |
| *Alisma plantago-aquatica* | broad-leaf water-plantain | herb | OBL | 2 |
| *Allium vineale* | field garlic | herb | FACU | ** |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ambrosia artemisiifolia* | common ragweed | herb | FACU | 0 |
| *Ammannia coccinea* | long-leaved ammannia | herb | OBL | 5 |
| *Asclepias incarnata* | swamp milkweed | herb | OBL | 4 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Boltonia asteroides* | false aster | herb | FACW | 5 |
| *Bromus commutatus* | hairy brome | herb | UPL | ** |
| *Carex frankii* | sedge | herb | OBL | 4 |
| *Carex tribuloides* | sedge | herb | FACW+ | 3 |
| *Carex vulpinoidea* | fox sedge | herb | OBL | 3 |
| *Celtis occidentalis* | hackberry | shrub | FAC- | 3 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 4 |
| *Chamaesyce maculata* | nodding spurge | herb | FACU- | 0 |
| *Commelina communis* | common day flower | herb | FAC | ** |
| *Conyza canadensis* | horseweed | herb | FAC- | 0 |
| *Cornus drummondii* | rough-leaved dogwood | shrub | FAC | 2 |
| *Cyperus acuminatus* | short-point flatsedge | herb | OBL | 2 |
| *Cyperus esculentus* | yellow nut-sedge | herb | FACW | 0 |
| *Echinochloa muricata* | barnyard grass | herb | OBL | 0 |
| *Eclipta prostrata* | yerba de tajo | herb | FACW | 2 |
| *Eleocharis obtusa* | spike rush | herb | OBL | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 4 |
| *Epilobium coloratum* | cinnamon willow herb | herb | OBL | 3 |
| *Erigeron annuus* | annual fleabane | herb | FAC- | 1 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 1 |
| *Festuca pratensis* | meadow fescue | herb | FACU- | ** |
| *Fraxinus pennsylvanica* | green ash | sapling, shrub | FACW | 2 |
| *Glyceria striata* | fowl manna grass | herb | OBL | 4 |
| *Hordeum pusillum* | little barley | herb | FAC | 0 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 1 (page 4 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, NE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 1 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Juncus torreyi* | Torrey's rush | herb | FACW | 3 |
| *Leucospora multifida* | leucospora | herb | FACW+ | 3 |
| *Lindernia dubia* | false pimpernel | herb | OBL | 5 |
| *Lobelia cardinalis* | cardinal-flower | herb | OBL | 6 |
| *Lobelia siphilitica* | blue cardinal-flower | herb | FACW+ | 4 |
| *Lonicera japonica* | Japanese honeysuckle | woody vine | FACU | ** |
| *Ludwigia palustris* | marsh purslane | herb | OBL | 4 |
| *Lycopus americanus* | common water horehound | herb | OBL | 3 |
| *Mimulus alatus* | winged monkey flower | herb | OBL | 6 |
| *Morus alba* | white mulberry | shrub | FAC | ** |
| *Oenothera biennis* | evening primrose | herb | FACU | 1 |
| *Penthorum sedoides* | ditch stonecrop | herb | OBL | 2 |
| *Phragmites australis* | common reed | herb | FACW+ | ** |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 1 |
| *Physalis subglabrata* | smooth ground cherry | herb | UPL | 0 |
| *Polygonum persicaria* | spotted lady's thumb | herb | FACW | ** |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Polygonum scandens* | climbing buckwheat | herb | FAC | 2 |
| *Populus deltoides* | eastern cottonwood | shrub | FAC+ | 2 |
| *Pyrus calleryana* | Bradford pear | shrub | UPL | ** |
| *Rorippa sessiliflora* | sessile-flowered cress | herb | OBL | 3 |
| *Rubus* sp. | blackberry | shrub | ----- | – |
| *Rumex crispus* | curly dock | herb | FAC+ | ** |
| *Salix nigra* | black willow | sapling, shrub | OBL | 3 |
| *Samolus valerandii* | brookweed | herb | OBL | 5 |
| *Senecio glabellus* | butterweed | herb | OBL | 0 |
| *Solidago canadensis* | Canada goldenrod | herb | FACU | 1 |
| *Sorghum halepense* | Johnson grass | herb | FACU | ** |
| *Toxicodendron radicans* | poison ivy | herb | FAC+ | 1 |
| *Trifolium hybridum* | alsike clover | herb | FAC- | ** |
| *Typha angustifolia* | narrow-leaved cattail | herb | OBL | ** |
| *Typha latifolia* | cattail | herb | OBL | 1 |
| *Ulmus americana* | American elm | shrub, herb | FACW- | 5 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 1 (page 5 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, NE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 585 m (1920 ft) northwest of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Verbena hastata* | blue vervain | herb | FACW+ | 3 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 2 |
| *Xanthium strumarium* | cocklebur | herb | FAC | 0 |

*Coefficient of Conservatism (Taft *et al.* 1997)
**Non-native species

FQI = R/√N = 137/√60 = 17.7
mCv = R/N = 137/60 = 2.3

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 2 (page 1 of 2)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Farmed Wetland
**Legal Description:** SE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 427 m (1400 ft) northwest of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: X No:
Comments: This site is farmed and is planted in row crops. The native vegetation on the site has been destroyed.

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Zea mays* (planted) | UPL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 0%

**Hydrophytic vegetation:** Yes: No: X
**Rationale:** Less than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Wabash County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: N 4/
Other indicators: This soil is found in a depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, an iron depleted matrix, and is found in a low-lying area. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 2 (page 2 of 2)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Farmed Wetland
**Legal Description:** SE 1/4, SE 1/4, NE 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) southwest of FAP 827 and 427 m (1400 ft) northwest of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1 m (40 inches)
Overview of hydrological flow through the system: This site receives water through precipitation and sheet flow from higher ground, and may also receive some overflow from an adjacent ditch. Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee. Water leaves the site via evapotranspiration.
Size of watershed: < 2.6 $km^2$ (1 $mi^2$)
Other field evidence observed: This site is lower than surrounding ground and appears to be saturated on an aerial photograph provided by the IDOT.

**Wetland hydrology:** Yes: X No:
**Rationale:** Although this site no longer receives flooding from the Wabash River, the relatively low topography and other evidence indicate that wetland hydrology is probably still present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** This cropped site is coded as Farmed Wetland by the Natural Resources Conservation Service. The NWI codes this site as PEMAf (farmed, temporarily flooded, emergent palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 3 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** E 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 183 m (600 ft) southwest of FAP 827 and 457 m (1500 ft) northwest of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Populus deltoides* | FAC+ | tree |
| 2. *Salix nigra* | OBL | tree |
| 3. *Lemna minor* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Undetermined (excavated)
On Wabash County hydric soils list?: Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Matrix color: NA
Other hydric soil indicators: Soil is saturated.

**Hydric soils:** Yes: X No:
**Rationale:** This site was excavated for a pond. This soil is ponded for a long duration or a very long duration during the growing season. This characteristic is evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 3 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** E 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 183 m (600 ft) southwest of FAP 827 and 457 m (1500 ft) northwest of the Wabash River

### HYDROLOGY

Inundated? Yes: X No: Depth of standing water: to approximately 1.2 m (4 ft)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from higher ground, and from a ditch that empties into it. Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee. Water leaves the site via evapotranspiration.
Size of watershed: $< 2.6$ km$^2$ (1 mi$^2$)
Other field evidence observed: This excavated site is lower than surrounding ground.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation and the relatively low topography indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI does not code this site as a wetland.

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 3 (page 3 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** E 1/4, Sec. 29, T1S, R12W
**Location:** Approximately 183 m (600 ft) southwest of FAP 827 and 457 m (1500 ft) northwest of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree, shrub | FACW | 1 |
| *Betula nigra* | river birch | tree | FACW | 4 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Campsis radicans* | trumpet creeper | woody vine | FAC | 2 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 4 |
| *Fraxinus pennsylvanica* | green ash | tree, shrub | FACW | 2 |
| *Lemna minor* | common duckweed | herb | OBL | 3 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 2 |
| *Salix nigra* | black willow | tree | OBL | 3 |

*Coefficient of Conservatism (Taft *et al.* 1997)
**Non-native species

$FQI = R/\sqrt{N} = 25/\sqrt{10} = 7.9$
$mCv = R/N = 25/10 = 2.5$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 1 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Populus deltoides* | FAC+ | tree |
| 3. *Aster simplex* | FACW | herb |
| 4. *Laportea canadensis* | FACW | herb |
| 5. *Ruellia strepens* | FAC+ | herb |
| 6. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Beaucoup silty clay loam
On Wabash County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 4/1
Other indicators: This soil is found in a low to depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Beaucoup silty clay loam as having aquic conditions. This soil has an iron depleted matrix and iron masses. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 2 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 inches)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (the levee), and from overflow of the Wabash River. Water leaves the site via evapotranspiration and sheet flow into the Wabash River.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Water-stained leaves, surface-scoured areas, drift lines and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PEM/FO1A (temporarily flooded, emergent/broad-leaved deciduous, forested palustrine wetland) and PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
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Center for Wildlife and Plant Ecology
607 East Peabody Drive
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217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 3 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer negundo* | box elder | tree, sapling, shrub | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Apocynum cannabinum* | dogbane | herb | FAC | 2 |
| *Arabis shortii* | toothed cress | herb | UPL | 6 |
| *Artemisia annua* | annual wormwood | herb | FACU | ** |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Bromus commutatus* | hairy brome | herb | UPL | ** |
| *Campanula americana* | American bellflower | herb | FAC | 4 |
| *Campsis radicans* | trumpet creeper | woody vine, herb | FAC | 2 |
| *Carex blanda* | woodland sedge | herb | FAC | 2 |
| *Carex grayi* | bur sedge | herb | FACW+ | 6 |
| *Celtis occidentalis* | hackberry | tree, sapling, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Chenopodium album* | lamb's quarters | herb | FAC- | ** |
| *Commelina virginica* | day flower | herb | FACW | 5 |
| *Conyza canadensis* | horseweed | herb | FAC- | 0 |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Echinochloa muricata* | barnyard grass | herb | OBL | 0 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 4 |
| *Euonymus fortunei* | climbing euonymus | woody vine | UPL | ** |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 1 |
| *Festuca pratensis* | meadow fescue | herb | FACU- | ** |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 2 |
| *Gleditsia triacanthos* | honey locust | herb | FAC | 2 |
| *Impatiens capensis* | jewelweed | herb | FACW | 2 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 1 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 2 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Lactuca floridana* | blue lettuce | herb | FAC- | 4 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 4 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Maclura pomifera* | hedge apple | tree | FACU | ** |
| *Menispermum canadense* | moonseed | herb | FAC | 4 |
| *Morus alba* | white mulberry | tree, sapling, shrub | FAC | ** |
| *Oxalis stricta* | yellow wood sorrel | herb | FACU | 0 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 1 |
| *Physalis subglabrata* | smooth ground cherry | herb | UPL | 0 |
| *Physostegia virginiana* | false dragonhead | herb | FACW | 6 |
| *Pilea pumila* | clearweed | herb | FACW | 3 |
| *Plantago rugelii* | Rugel's plantain | herb | FAC | 0 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum* sp. | smartweed | herb | —— | – |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 2 |
| *Rorippa sylvestris* | creeping yellow cress | herb | OBL | ** |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 6 |
| *Rumex crispus* | curly dock | herb | FAC+ | ** |
| *Salix exigua* | sandbar willow | sapling, shrub | OBL | 1 |
| *Salix nigra* | black willow | tree | OBL | 3 |
| *Sambucus canadensis* | elderberry | shrub | FACW- | 2 |
| *Sanicula gregaria* | common snakeroot | herb | FAC+ | 2 |
| *Senecio glabellus* | butterweed | herb | OBL | 0 |
| *Sicyos angulatus* | bur cucumber | herb | FACW- | 3 |
| *Smilax hispida* | bristly greenbrier | woody vine | FAC | 3 |
| *Solidago gigantea* | late goldenrod | herb | FACW | 3 |
| *Sorghum halepense* | Johnson grass | herb | FACU | ** |
| *Taraxacum officinale* | common dandelion | herb | FACU | ** |
| *Thaspium trifoliatum* | meadow parsnip | herb | UPL | 6 |
| *Torilis japonica* | hedge parsley | herb | UPL | ** |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Verbena urticifolia* | white vervian | herb | FAC+ | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 4 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 5 of 5)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of FAP 827, directly adjacent to the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 2 |

*Coefficient of Conservatism (Taft *et al.* 1997)
**Non-native species

FQI = R/√N = 133/√57 = 17.6
mCv = R/N = 133/57 = 2.3

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 5 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately beneath to northeast of the existing bridge on FAP 827, 24 m (80 ft) northwest of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Aster simplex* | FACW | herb |
| 2. *Elymus virginicus* | FACW- | herb |
| 3. *Rorippa sylvestris* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Beaucoup silty clay loam
On Wabash County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 4/1
Other indicators: This soil is found in a low to depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Beaucoup silty clay loam as having aquic conditions. This soil has an iron depleted matrix and iron masses. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 5 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately beneath to northeast of the existing bridge on FAP 827, 24 m (80 ft) northwest of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 inches)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (the levee), and from overflow of the Wabash River. Water leaves the site via evapotranspiration.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PEM/FO1A (temporarily flooded, emergent/broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 5 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately beneath to northeast of the existing bridge on FAP 827, 24 m (80 ft) northwest of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree | FACW | 1 |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Apocynum cannabinum* | dogbane | herb | FAC | 2 |
| *Asclepias syriaca* | common milkweed | herb | UPL | 0 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Calystegia sepium* | American bindweed | herb | FAC | 1 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 2 |
| *Cenchrus longispinus* | mat sandbur | herb | UPL | 0 |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Desmodium paniculatum* | panicled tick trefoil | herb | FACU | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 4 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 1 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 2 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Mollugo verticillata* | carpetweed | herb | FAC | ** |
| *Morus alba* | white mulberry | tree, shrub | FAC | ** |
| *Oxalis stricta* | yellow wood sorrel | herb | FACU | 0 |
| *Panicum virgatum* | prairie switchgrass | herb | FAC+ | 4 |
| *Paspalum ciliatifolium* | beadgrass | herb | UPL | 3 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 1 |
| *Physalis subglabrata* | smooth ground cherry | herb | UPL | 0 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum lapathifolium* | curttop lady's thumb | herb | FACW+ | 0 |
| *Polygonum pensylvanicum* | common smartweed | herb | FACW+ | 1 |
| *Polygonum persicaria* | spotted lady's thumb | herb | FACW | ** |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Polygonum scandens* | climbing buckwheat | herb | FAC | 2 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 2 |
| *Rorippa sylvestris* | creeping yellow cress | herb | OBL | ** |
| *Rumex altissimus* | tall dock | herb | FACW- | 2 |
| *Rumex crispus* | curly dock | herb | FAC+ | ** |
| *Setaria glauca* | pigeon grass | herb | FAC | ** |
| *Sida spinosa* | prickly sida | herb | FACU | ** |
| *Sorghum halepense* | Johnson grass | herb | FACU | ** |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 5 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 21 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Illinois **County:** Wabash
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, NW 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately beneath to northeast of the existing bridge on FAP 827, 24 m (80 ft) northwest of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 4 |
| *Taraxacum officinale* | common dandelion | herb | FACU | ** |
| *Torilis japonica* | hedge parsley | herb | UPL | ** |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 2 |

*Coefficient of Conservatism (Taft *et al.* 1997)
**Non-native species

$FQI = R/\sqrt{N} = 48/\sqrt{29} = 8.9$
$mCv = R/N = 48/29 = 1.7$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 6 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of Indiana Route 64, directly adjacent to the Wabash River (including the north part of Patoka Island)

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Aster simplex* | FACW | herb |
| 3. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 5/2, 10YR 4/2
Other indicators: This soil is found in a low to depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has an iron depleted matrix, iron masses, and iron depletions. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 6 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of Indiana Route 64, directly adjacent to the Wabash River (including the north part of Patoka Island)

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 inches)
Overview of hydrological flow through the system: This site receives water through precipitation and from overflow of the Wabash River. Water leaves the site via evapotranspiration and sheet flow into the Wabash River.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Water marks, surface-scoured areas, drift lines, wetland drainage patterns, and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 6 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of Indiana Route 64, directly adjacent to the Wabash River (including the north part of Patoka Island)

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer negundo* | box elder | tree | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree, sapling | FACW | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Ampelopsis cordata* | raccoon grape | woody vine | FAC+ | 3 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Bidens* sp. | beggar-ticks | herb | —— | – |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | woody vine, herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex* sp. | sedge | herb | —— | – |
| *Carya illinoensis* | pecan | tree | FACW | 4 |
| *Celtis occidentalis* | hackberry | tree, sapling, shrub | FAC- | 3 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Crataegus mollis* | red haw | sapling | FACW- | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Forestiera acuminata* | swamp privet | sapling, shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Hibiscus laevis* | rose mallow | herb | OBL | 4 |
| *Impatiens capensis* | jewelweed | herb | FACW | 2 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Morus alba* | white mulberry | sapling, shrub | FAC | ** |
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine | FAC- | 2 |
| *Pilea pumila* | clearweed | herb | FACW | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 6 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SW 1/4, Sec. 28, T1S, R12W
**Location:** Immediately northeast and southwest of Indiana Route 64, directly adjacent to the Wabash River (including the north part of Patoka Island)

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Ranunculus septentrionalis* | swamp buttercup | herb | FACW+ | 5 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Salix nigra* | black willow | tree | OBL | 3 |
| *Saururus cernuus* | lizard's tail | herb | OBL | 4 |
| *Sicyos angulatus* | bur cucumber | herb | FACW- | 3 |
| *Sium suave* | water parsnip | herb | OBL | 5 |
| *Smilax hispida* | bristly greenbrier | woody vine | FAC | 3 |
| *Smilax rotundifolia* | catbrier | woody vine | FAC | 4 |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Stachys tenuifolia* | smooth hedge nettle | herb | OBL | 4 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 135/\sqrt{47} = 19.7$
$mCv = R/N = 135/47 = 2.9$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 7 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) northeast of Indiana Route 64 and 353 m (1160 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Forestiera acuminata* | OBL | sapling/shrub |
| 3. *Polygonum punctatum* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: undetermined (excavated)
On Gibson County hydric soils list? Yes: No: Undetermined: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: NA Redox depletions: NA
Matrix color: NA
Other indicators: This site has been excavated and now receives water from surrounding higher ground.

**Hydric soils:** Yes: X No:
**Rationale:** The soil at this site has been excavated a few meters. Soil colors of this material would not reflect true soil genesis at this site. We believe though, due to the topography of the site that this site ponds for a long or very long duration during the growing season. This characteristic is evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 7 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) northeast of Indiana Route 64 and 353 m (1160 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.0 m (40 inches)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.

Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This excavated site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Water-stained leaves, water marks, drift lines, and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 7 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) northeast of Indiana Route 64 and 353 m (1160 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer negundo* | box elder | herb | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree, sapling | FACW | 1 |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Amsonia tabernaemontana* | blue star | herb | FACW | 5 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree | FACW | 2 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | woody vine, herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carya illinoensis* | pecan | tree, sapling | FACW | 4 |
| *Celtis laevigata* | sugarberry | tree | FACW | 7 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Crataegus viridis* | green hawthorn | sapling | FACW | 7 |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Eclipta prostrata* | yerba de tajo | herb | FACW | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Forestiera acuminata* | swamp privet | tree, sapling, shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Hibiscus laevis* | rose mallow | herb | OBL | 4 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Leersia lenticularis* | catchfly grass | herb | OBL | 5 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Morus alba* | white mulberry | shrub | FAC | ** |
| *Phytolacca americana* | pokeweed | herb | FAC- | 0 |
| *Pilea pumila* | clearweed | herb | FACW | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum pensylvanicum* | common smartweed | herb | FACW+ | 0 |

Species list continued on following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 7 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) northeast of Indiana Route 64 and 353 m (1160 ft) southeast of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Scutellaria lateriflora* | mad-dog skullcap | herb | OBL | 4 |
| *Senecio glabellus* | butterweed | herb | OBL | 0 |
| *Sicyos angulatus* | bur cucumber | herb | FACW- | 3 |
| *Sida spinosa* | prickly sida | herb | FACU | ** |
| *Smilax rotundifolia* | catbrier | woody vine | FAC | 4 |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |
| *Xanthium strumarium* | cockle bur | herb | FAC | 0 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 123/\sqrt{46} = 18.1$
$mCv = R/N = 123/46 = 2.7$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 8 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 54.9 m (180 ft) northeast of Indiana Route 64 and 500 m (1640 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Polygonum punctatum* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Undetermined
On Gibson County hydric soils list?: Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Matrix color: NA
Other hydric soil indicators: Soil is saturated.

**Hydric soils:** Yes: X No:
**Rationale:** The soil at this site has been excavated a few meters. This soil is ponded for a long duration or a very long duration during the growing season. This characteristic is evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 8 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 54.9 m (180 ft) northeast of Indiana Route 64 and 500 m (1640 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: X (in part) No: Depth of standing water: to 0.10 m (4 in)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This excavated site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Algal mats were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation (in part of the site), the relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PUBG (intermittently exposed, palustrine wetland with an unconsolidated bottom).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 8 (page 3 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** NE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 54.9 m (180 ft) northeast of Indiana Route 64 and 500 m (1640 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Abutilon theophrasti* | velvet-leaf | herb | FACU- | ** |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ammannia coccinea* | long-leaved ammannia | herb | OBL | 2 |
| *Apocynum cannabinum* | dogbane | herb | FAC | 2 |
| *Bidens* sp. | beggar-ticks | herb | ---- | -- |
| *Cyperus* sp. | flatsedge | herb | ---- | -- |
| *Eclipta prostrata* | yerba de tajo | herb | FACW | 3 |
| *Forestiera acuminata* | swamp privet | shrub | OBL | 8 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Leptochloa fascicularis* | bearded sprangle top | herb | OBL | ** |
| *Polygonum pensylvanicum* | common smartweed | herb | FACW+ | 0 |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Rorippa sessiliflora* | sessile-flowered cress | herb | OBL | 3 |
| *Sida spinosa* | prickly sida | herb | FACU | ** |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Xanthium strumarium* | cockle bur | herb | FAC | 0 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 27/\sqrt{12} = 7.8$
$mCv = R/N = 27/12 = 2.3$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 9 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Immediately north and south (and directly under a bridge) of Indiana Route 64 and 567 m (1860 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Cephalanthus occidentalis* | OBL | shrub |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Undetermined (excavated)
On Gibson County hydric soils list?: Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Matrix color: NA
Other hydric soil indicators: Soil is saturated.

**Hydric soils:** Yes: X No:
**Rationale:** This site was excavated for a pond. This soil is ponded for a long duration or a very long duration during the growing season. This characteristic is evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 9 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Immediately north and south (and directly under a bridge) of Indiana Route 64 and 567 m (1860 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: X No: Depth of standing water: to approximately 1.8 m (6 ft)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.

Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This excavated site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation, the relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PUBG (intermittently exposed, palustrine wetland with an unconsolidated bottom).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 9 (page 3 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Immediately north and south (and directly under a bridge) of Indiana Route 64 and 567 m (1860 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Betula nigra* | river birch | shrub | FACW | 2 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Fraxinus pennsylvanica* | green ash | shrub | FACW | 1 |
| *Hibiscus laevis* | rose mallow | herb | OBL | 4 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Lemna minor* | common duckweed | herb | OBL | 3 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Quercus palustris* | pin oak | tree | FACW | 3 |
| *Salix nigra* | black willow | shrub | OBL | 3 |
| *Saururus cernuus* | lizard's tail | herb | OBL | 4 |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |

*Coefficient of Conservatism (Rothrock 2004)

FQI = R/√N = 43/√17 = 10.4
mCv = R/N = 43/17 = 2.5

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 10 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** W 1/2, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) northeast of Indiana Route 64 and 610 m (2000 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Aster simplex* | FACW | herb |
| 3. *Leersia virginica* | FACW | herb |
| 4. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Newark silty clay loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: No: X
Matrix color: 10YR 5/4
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** While Newark silty clay loam has iron masses, this soil lacks the required iron depleted matrix. Thus, this site does not have hydric soils.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 10 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** W 1/2, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) northeast of Indiana Route 64 and 610 m (2000 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration and sheet flow into the adjacent pond (Site 9), adjacent lower ground (Sites 18 & 19), and a ditch that parallels Indiana Route 64.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Drift lines and water-borne sediment deposits were observed at this site. This site is topographically higher than adjacent areas.

**Wetland hydrology:** Yes: No: X
**Rationale:** Although this site undoubtedly floods on occasion, we believe inundation and saturation are of short duration only. The relatively high topography suggests that any water this site receives rapidly drains onto adjacent lower ground. In our opinion, this site is not flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. This site does not meet all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 10 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** W 1/2, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) northeast of Indiana Route 64 and 610 m (2000 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer negundo* | box elder | tree | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Ampelopsis cordata* | raccoon grape | woody vine | FAC+ | 3 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree | FACW | 2 |
| *Bignonia capreolata* | cross-vine | woody vine | FACW | 7 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | shrub, woody vine | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Carya laciniosa* | kingnut hickory | tree, sapling | FACW | 8 |
| *Celtis occidentalis* | hackberry | tree, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Crataegus mollis* | red hawthorn | tree | FACW- | 2 |
| *Diospyros virginiana* | persimmon | tree | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | shrub | FAC | 1 |
| *Gonolobus suberosa* | angle-fruited milk vine | herb | NI | 7 |
| *Gymnocladus dioica* | Kentucky coffeetree | shrub | UPL | 4 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Liquidambar styraciflua* | sweet gum | tree, sapling, shrub | FACW | 4 |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Morus alba* | white mulberry | shrub | FAC | ** |
| *Parthenocissus quinquefolia* | Virginia creeper | herb | FAC- | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 10 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** W 1/2, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 18.3 m (60 ft) northeast of Indiana Route 64 and 610 m (2000 ft) southeast of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Quercus macrocarpa* | bur oak | tree, sapling, shrub | FAC- | 5 |
| *Quercus pagoda* | cherrybark oak | tree | FAC | 5 |
| *Quercus palustris* | pin oak | tree | FACW | 3 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Saururus cernuus* | lizard's tail | herb | OBL | 4 |
| *Smilax hispida* | bristly greenbrier | woody vine | FAC | 3 |
| *Smilax rotundifolia* | cat brier | woody vine | FAC | 4 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling, shrub | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 141/√45 = 21.0
mCv = R/N = 141/45 = 3.1

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 11 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** S 1/2, SE 1/4, SE 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) north of 970 W and 232 m (760 ft) southwest of Indiana Route 64

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: X No:
Comments: This cropped site was recently treated with herbicide. Most of the plants, although readily identifiable, had recently died.

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Ammannia coccinea* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC. Although very few living plants were alive at the time of the field survey, we were able to determine that the vegetation was hydrophytic before herbicide treatment.

### SOILS

Series and phase: Newark silty clay loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: No: X
Matrix color: 10YR 5/3
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** While Newark silty clay loam has iron masses, this soil lacks the required iron depleted matrix. Thus, this site does not have hydric soils.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 11 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** S 1/2, SE 1/4, SE 1/4, SW 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) north of 970 W and 232 m (760 ft) southwest of Indiana Route 64

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.0 m (40 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from surrounding higher ground, and from overflow of the Wabash River. Water leaves the site via evapotranspiration.

Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Soybeans planted on the site earlier this year were mostly dead, presumably from wet conditions. Algal mats were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is probably present. In our opinion, this site is probably flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: Unknown: X
**Rationale for decision:** The final determination for this cropped site remains unknown, pending a determination from the Natural Resources Conservation Service. Personnel from the local NRCS office were unable to supply a determination at this time. Although dominant hydrophytic vegetation is present and wetland hydrology is probably present, we were unable to find indicators of hydric soils. However, we nevertheless believe that this site is probably a wetland. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland).

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 12 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NW 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 5.5 m (18 ft) south of 970 W and 305 m (1000 ft) southwest of Indiana Route 64

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Amaranthus tuberculatus* | OBL | herb |
| 2. *Polygonum lapathifolium* | FACW+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Newark silty clay loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: No: X
Matrix color: 10YR 5/3
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** While Newark silty clay loam has iron masses, this soil lacks the required iron depleted matrix. Thus, this site does not have hydric soils.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 12 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NW 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 5.5 m (18 ft) south of 970 W and 305 m (1000 ft) southwest of Indiana Route 64

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.0 m (40 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from surrounding higher ground, and from overflow of the Wabash River. Water leaves the site via evapotranspiration.

Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Soybeans planted on the site earlier this year were mostly dead, presumably from wet conditions.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is probably present. In our opinion, this site is probably flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: Unknown: X
**Rationale for decision:** The final determination for this cropped site remains unknown, pending a determination from the Natural Resources Conservation Service. Personnel from the local NRCS office were unable to supply a determination at this time. Although dominant hydrophytic vegetation is present and wetland hydrology is probably present, we were unable to find indicators of hydric soils. However, we nevertheless believe that this site is probably a wetland. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland).

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 12 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NW 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 5.5 m (18 ft) south of 970 W and 305 m (1000 ft) southwest of Indiana Route 64

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Ammannia coccinea* | long-leaved ammannia | herb | OBL | 2 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Chamaesyce* sp. | spurge | herb | ---- | – |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Cyperus acuminatus* | short-point flatsedge | herb | OBL | 2 |
| *Cyperus esculentus* | yellow nut-sedge | herb | FACW | 0 |
| *Eclipta prostrata* | yerba de tajo | herb | FACW | 3 |
| *Eleocharis obtusa* | spike rush | herb | OBL | 1 |
| *Eragrostis hypnoides* | pony grass | herb | OBL | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Glycine max* (planted) | soybean | herb | UPL | ** |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Leucospora multifida* | leucospora | herb | FACW+ | 3 |
| *Lindernia dubia* | false pimpernel | herb | OBL | 3 |
| *Polygonum lapathifolium* | curttop lady's thumb | herb | FACW+ | 0 |
| *Populus deltoides* | eastern cottonwood | herb | FAC+ | 1 |
| *Portulaca oleracea* | purslane | herb | FAC- | ** |
| *Rorippa islandica* | marsh yellow cress | herb | OBL | 2 |
| *Rumex crispus* | curly dock | herb | FAC+ | ** |

Species list continued on following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 12 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Cropland
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NW 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 5.5 m (18 ft) south of 970 W and 305 m (1000 ft) southwest of Indiana Route 64

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Salix nigra* | black willow | herb | OBL | 3 |
| *Senecio glabellus* | butterweed | herb | OBL | 0 |
| *Sida spinosa* | prickly sida | herb | FACU | ** |
| *Solanum carolinense* | horse-nettle | herb | FACU- | 0 |
| *Veronica peregrina* | purslane speedwell | herb | FACW+ | 0 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 29/√24 = 5.9
mCv = R/N = 29/24 = 1.2

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 13 (page 1 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) southwest of Indiana Route 64 and 323 m (1060 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Celtis occidentalis* | FAC- | tree |
| 2. *Gleditsia triacanthos* | FAC | tree |
| 3. *Maclura pomifera* | FACU | tree |
| 4. *Morus alba* | FAC | tree |
| 5. *Celtis occidentalis* | FAC- | sapling |
| 6. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 50%

**Hydrophytic vegetation:** Yes: No: X
**Rationale:** Only 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Nolin silt loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: X Redox depletions: Yes: No: X
Matrix color: 10YR 4/3
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** Nolin silt loam is a well drained soil that lacks hydric soil characteristics.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 13 (page 2 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) southwest of Indiana Route 64 and 323 m (1060 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (the road embankment), and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration and sheet flow onto nearby lower ground.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Drift lines were observed at this site. This site is partially covered with fill material and is topographically higher than adjacent areas.

**Wetland hydrology:** Yes: No: X
**Rationale:** Although this site undoubtedly floods on occasion, we believe inundation and saturation are of short duration only. The relatively high topography suggests that any water this site receives drains onto adjacent lower ground. In our opinion, this site is not flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all absent. This site meets none of the wetland criteria. The NWI does not code this site as a wetland.

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 13 (page 3 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) southwest of Indiana Route 64 and 323 m (1060 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree | FACW | 1 |
| *Ambrosia artemisiifolia* | common ragweed | herb | FACU | 0 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Campsis radicans* | trumpet creeper | shrub, herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex* sp. | sedge | herb | —— | – |
| *Carya illinoensis* | pecan | shrub | FACW | 4 |
| *Celtis occidentalis* | hackberry | tree, sapling, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Chenopodium album* | lamb's quarters | herb | FAC- | ** |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Crataegus mollis* | red hawthorn | tree | FACW- | 2 |
| *Diospyros virginiana* | persimmon | sapling | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Hackelia virginiana* | stickseed | herb | FAC- | 0 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Maclura pomifera* | hedge apple | tree | FACU | ** |
| *Morus alba* | white mulberry | tree, shrub | FAC | ** |
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine | FAC- | 2 |
| *Pilea pumila* | clearweed | herb | FACW | 2 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Sicyos angulatus* | bur cucumber | herb | FACW- | 3 |
| *Smilax rotundifolia* | cat brier | woody vine | FAC | 4 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree | FACW- | 3 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 13 (page 4 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** NW 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) southwest of Indiana Route 64 and 323 m (1060 ft) southeast of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 70/√31 = 12.6
mCv = R/N = 70/31 = 2.3

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 14 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) east of 970 W and 24.4 m (80 ft) southwest of Indiana Route 64

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Fraxinus pennsylvanica* | FACW | tree |
| 3. *Populus deltoides* | FAC+ | tree |
| 4. *Ulmus americana* | FACW- | tree |
| 5. *Aster simplex* | FACW | herb |
| 6. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Mottle color: 2.5Y 5/2
Other indicators: This soil is found in a low to depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, iron depletions, and an iron depleted matrix. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 14 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) east of 970 W and 24.4 m (80 ft) southwest of Indiana Route 64

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.

Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This excavated site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Drift lines were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI does not code this site as a wetland.

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 14 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) east of 970 W and 24.4 m (80 ft) southwest of Indiana Route 64

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer negundo* | box elder | tree, shrub | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Amsonia tabernaemontana* | blue star | herb | FACW | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree, sapling | FACW | 2 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Carya illinoensis* | pecan | shrub | FACW | 4 |
| *Catalpa speciosa* | catalpa | herb | FACU | 0 |
| *Celtis laevigata* | sugarberry | tree | FACW | 7 |
| *Celtis occidentalis* | hackberry | tree, sapling, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Cornus drummondii* | rough-leaved dogwood | shrub | FAC | 2 |
| *Crataegus viridis* | green hawthorn | sapling | FACW | 7 |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Desmodium* sp. | tick trefoil | herb | —— | – |
| *Diospyros virginiana* | persimmon | tree | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Gonolobus suberosa* | angle-fruited milk vine | herb | NI | 7 |
| *Ilex decidua* | swamp holly | sapling, shrub | FACW | 6 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Liquidambar styraciflua* | sweet gum | shrub | FACW | 4 |
| *Lysimachia ciliata* | fringed loosestrife | herb | FACW | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Maclura pomifera* | hedge apple | tree, sapling | FACU | ** |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Morus alba* | white mulberry | herb | FAC | ** |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 14 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** SE 1/4, SW 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 4.6 m (15 ft) east of 970 W and 24.4 m (80 ft) southwest of Indiana Route 64

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine, herb | FAC- | 2 |
| *Pilea pumila* | clearweed | herb | FACW | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Quercus palustris* | pin oak | tree, sapling, shrub | FACW | 3 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Smilax rotundifolia* | catbrier | woody vine | FAC | 4 |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling, shrub | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 132/\sqrt{45} = 19.7$
$mCv = R/N = 132/45 = 2.9$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 15 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 30.5 m (100 ft) south of 970 W and 128 m (420 ft) southwest of Indiana Route 64

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Populus deltoides* | FAC+ | tree |
| 3. *Salix nigra* | OBL | tree |
| 4. *Cephalanthus occidentalis* | OBL | shrub |
| 5. *Lemna minor* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: undetermined
On Gibson County hydric soils list? Yes: No: Undetermined: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Mottle color: NA
Other indicators: This site has been excavated and the soil is saturated in the spring and early summer.

**Hydric soils:** Yes: X No:
**Rationale:** The soil at this site has been excavated a few meters. We believe this site ponds for a long or very long duration during the growing season.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 15 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 30.5 m (100 ft) south of 970 W and 128 m (420 ft) southwest of Indiana Route 64

### HYDROLOGY

Inundated? Yes: X (in part) No: X Depth of standing water: to 1.8 m (6 ft)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This excavated site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Water-stained leaves, water marks, and drift lines were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation, the relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland) and PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 15 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 30.5 m (100 ft) south of 970 W and 128 m (420 ft) southwest of Indiana Route 64

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Amaranthus tuberculatus* | tall waterhemp | herb | OBL | 1 |
| *Azolla caroliniana* | mosquito fern | herb | OBL | 4 |
| *Betula nigra* | river birch | tree, sapling, shrub | FACW | 2 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | woody vine, herb | FAC | 1 |
| *Celtis occidentalis* | hackberry | shrub | FAC- | 3 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Echinochloa muricata* | barnyard grass | herb | OBL | 1 |
| *Eclipta prostrata* | yerba de tajo | herb | FACW | 3 |
| *Forestiera acuminata* | swamp privet | sapling, shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | sapling, shrub | FACW | 1 |
| *Hibiscus laevis* | rose mallow | herb | OBL | 4 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Lemna minor* | common duckweed | herb | OBL | 3 |
| *Ludwigia palustris* | marsh purslane | herb | OBL | 3 |
| *Ludwigia polycarpa* | false loosestrife | herb | OBL | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Morus alba* | white mulberry | herb | FAC | ** |
| *Panicum rigidulum* | munro grass | herb | FACW | 4 |
| *Phytolacca americana* | pokeweed | herb | FAC- | 0 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Rorippa* sp. | yellow cress | herb | ---- | – |
| *Rubus* sp. | blackberry | herb | ---- | – |
| *Salix nigra* | black willow | tree | OBL | 3 |
| *Scutellaria lateriflora* | mad-dog skullcap | herb | OBL | 4 |
| *Smilax* sp. | cat brier | herb | ---- | – |
| *Solanum ptycanthum* | black nightshade | herb | FACU- | 0 |
| *Toxicodendron radicans* | poison ivy | herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree | FACW- | 3 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 15 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 30.5 m (100 ft) south of 970 W and 128 m (420 ft) southwest of Indiana Route 64

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Viola pratincola* | common blue violet | herb | FAC | 1 |
| *Vitis riparia* | riverbank grape | herb | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 74/√30 = 13.5
mCv = R/N = 74/30 = 2.5

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 16 (page 1 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) northeast of Indiana Route 64 and 549 m (1800 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Quercus shumardii* | FACW- | tree |
| 2. *Asimina triloba* | FAC | sapling/shrub |
| 3. *Aster simplex* | FACW | herb |
| 4. *Chasmanthium latifolium* | FACW | herb |
| 5. *Elymus virginicus* | FACW- | herb |
| 6. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Nolin silt loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: X Redox depletions: Yes: No: X
Matrix color: 10YR 5/4
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** Nolin silt loam is a well drained soil that lacks hydric soil characteristics.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 16 (page 2 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) northeast of Indiana Route 64 and 549 m (1800 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration and sheet flow onto nearby lower ground (Sites 7 & 9).
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. This site is 3.0-3.7 m (10-12 ft) higher than the adjacent Sites 7 and 9.

**Wetland hydrology:** Yes: No: X
**Rationale:** Although this site probably floods on occasion, we believe inundation and saturation are of short duration only. The relatively high topography suggests that any water this site receives rapidly drains onto adjacent lower ground. In our opinion, this site is not flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. This site does not meet all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 16 (page 3 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) northeast of Indiana Route 64 and 549 m (1800 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Arisaema dracontium* | green dragon | herb | FACW | 5 |
| *Asimina triloba* | pawpaw | tree, sapling, shrub | FAC | 6 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree, sapling | FACW | 2 |
| *Bignonia capreolata* | cross-vine | woody vine | FACW | 7 |
| *Campsis radicans* | trumpet creeper | shrub | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex* sp. | sedge | herb | ---- | – |
| *Carpinus caroliniana* | American hornbeam | shrub | FAC | 5 |
| *Carya cordiformis* | bitternut hickory | sapling | FAC | 5 |
| *Carya laciniosa* | kingnut hickory | sapling | FACW | 8 |
| *Celtis occidentalis* | hackberry | tree, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Cryptotaenia canadensis* | honewort | herb | FAC | 3 |
| *Desmodium* sp. | tick trefoil | herb | ---- | – |
| *Diospyros virginiana* | persimmon | shrub | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Fraxinus pennsylvanica* | green ash | sapling, shrub | FACW | 1 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Lilium michiganense* | Michigan lily | herb | FAC+ | 5 |
| *Liquidambar styraciflua* | sweet gum | tree, sapling | FACW | 4 |
| *Lysimachia ciliata* | fringed loosestrife | herb | FACW | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Morus alba* | white mulberry | shrub | FAC | ** |
| *Nyssa sylvatica* | black gum | herb | UPL | 5 |
| *Oxalis stricta* | yellow wood sorrel | herb | FACU | 0 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 16 (page 4 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 28 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** S 1/2, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 12.2 m (40 ft) northeast of Indiana Route 64 and 549 m (1800 ft) southeast of the Wabash River

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine | FAC- | 2 |
| *Quercus macrocarpa* | bur oak | tree | FAC- | 5 |
| *Quercus pagoda* | cherrybark oak | tree | FAC | 5 |
| *Quercus palustris* | pin oak | shrub | FACW | 3 |
| *Quercus shumardii* | Shumard's oak | tree | FACW- | 7 |
| *Ranunculus septentrionalis* | swamp buttercup | herb | FACW+ | 5 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Sanicula gregaria* | common snakeroot | herb | FAC+ | 2 |
| *Sassafras albidum* | sassafras | sapling, shrub | FACU | 1 |
| *Smilax rotundifolia* | cat brier | woody vine | FAC | 4 |
| *Symphoricarpos orbiculatus* | coralberry | herb | FACU | 1 |
| *Tilia americana* | basswood | tree | FACU | 5 |
| *Toxicodendron radicans* | poison ivy | shrub, woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | sapling, shrub | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 161/√49 = 23.0
mCv = R/N = 161/49 = 3.3

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 17 (page 1 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 3.0 m (10 ft) south of 970 W and 171 m (560 ft) northwest of Maucks Pond

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Ulmus americana* | FACW- | tree |
| 3. *Ulmus americana* | FACW- | sapling |
| 4. *Campsis radicans* | FAC | shrub |
| 5. *Aster ontarionis* | FAC | herb |
| 6. *Chasmanthium latifolium* | FACW | herb |
| 7. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Nolin silt loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: X Redox depletions: Yes: No: X
Matrix color: 10YR 4/3
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** Nolin silt loam is a well drained soil that lacks hydric soil characteristics.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 17 (page 2 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 3.0 m (10 ft) south of 970 W and 171 m (560 ft) northwest of Maucks Pond

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration and sheet flow onto nearby lower ground (Site 15).
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Drift lines were observed at this site. This site is 2.4-3.0 m (8-10 ft) higher than the adjacent Site 15.

**Wetland hydrology:** Yes: No: X
**Rationale:** Although this site undoubtedly floods on occasion, we believe inundation and saturation are of short duration only. The relatively high topography suggests that any water this site receives rapidly drains onto adjacent lower ground. In our opinion, this site is not flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. This site does not meet all of the wetland criteria. The NWI does not code this site as a wetland.

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 17 (page 3 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 3.0 m (10 ft) south of 970 W and 171 m (560 ft) northwest of Maucks Pond

## SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acer saccharinum* | silver maple | tree | FACW | 1 |
| *Ambrosia trifida* | giant ragweed | herb | FAC+ | 0 |
| *Ampelopsis cordata* | raccoon grape | woody vine | FAC+ | 3 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Betula nigra* | river birch | tree | FACW | 2 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | shrub, woody vine, herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Carex* sp. | sedge | herb | —— | – |
| *Carex typhina* | sedge | herb | OBL | 7 |
| *Carya illinoensis* | pecan | tree | FACW | 4 |
| *Celtis occidentalis* | hackberry | tree, shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Cornus drummondii* | rough-leaved dogwood | shrub | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Euonymus fortunei* | climbing euonymus | herb | UPL | ** |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Impatiens capensis* | jewelweed | herb | FACW | 2 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Morus alba* | white mulberry | tree, shrub | FAC | ** |
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine, herb | FAC- | 2 |
| *Polygonum virginianum* | Virginia knotweed | herb | FAC | 3 |
| *Ruellia strepens* | smooth ruellia | herb | FAC+ | 4 |
| *Sambucus canadensis* | elderberry | herb | FACW- | 2 |
| *Solidago gigantea* | late goldenrod | herb | FACW | 4 |
| *Toxicodendron radicans* | poison ivy | shrub, woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling, shrub | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Viola pratincola* | common blue violet | herb | FAC | 1 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 17 (page 4 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 3.0 m (10 ft) south of 970 W and 171 m (560 ft) northwest of Maucks Pond

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 96/√33 = 16.7
mCv = R/N = 96/33 = 2.9

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 18 (page 1 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 140 m (460 ft) northeast of Indiana Route 64 and 646 m (2120 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Leersia virginica* | FACW | herb |
| 3. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 6/1 and 6/2
Other indicators: This soil is found in a depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, concretions, and an iron depleted matrix. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 18 (page 2 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 140 m (460 ft) northeast of Indiana Route 64 and 646 m (2120 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (Site 10), and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Water-stained leaves, drift lines, and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 18 (page 3 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 140 m (460 ft) northeast of Indiana Route 64 and 646 m (2120 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Amsonia tabernaemontana* | blue star | herb | FACW | 5 |
| *Asclepias perennis* | swamp white milkweed | herb | OBL | 8 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Celtis occidentalis* | hackberry | shrub | FAC- | 3 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Cynanchum laeve* | blue vine | herb | FAC | 1 |
| *Fraxinus pennsylvanica* | green ash | shrub, herb | FACW | 1 |
| *Gonolobus suberosa* | angle-fruited milk vine | herb | NI | 7 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Smilax rotundifolia* | catbrier | woody vine | FAC | 4 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)

$FQI = R/\sqrt{N} = 70/\sqrt{20} = 15.7$
$mCv = R/N = 70/20 = 3.5$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 19 (page 1 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 162 m (530 ft) northeast of Indiana Route 64 and 723 m (2400 ft) southeast of the Wabash River

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Liquidambar styraciflua* | FACW | tree |
| 3. *Celtis occidentalis* | FAC- | shrub |
| 4. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 75%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 6/1 and 6/2
Other indicators: This soil is found in a depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, concretions, and an iron depleted matrix. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 19 (page 2 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 162 m (530 ft) northeast of Indiana Route 64 and 723 m (2400 ft) southeast of the Wabash River

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: 0.9 m (35 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (Site 10), and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration.
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is lower than surrounding ground. It is located within the floodplain of the Wabash River and is on the river side of a levee. Water-stained leaves, drift lines, and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 19 (page 3 of 3)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** NW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 162 m (530 ft) northeast of Indiana Route 64 and 723 m (2400 ft) southeast of the Wabash River

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Amsonia tabernaemontana* | blue star | herb | FACW | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree, shrub | FACW | 2 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Carex typhina* | sedge | herb | OBL | 7 |
| *Carya illinoensis* | pecan | sapling, shrub | FACW | 4 |
| *Celtis occidentalis* | hackberry | sapling, shrub | FAC- | 3 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Diospyros virginiana* | persimmon | tree, shrub | FAC | 2 |
| *Forestiera acuminata* | swamp privet | shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | sapling, shrub | FACW | 1 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Ipomoea lacunosa* | white morning-glory | herb | FACW | 2 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Laportea canadensis* | wood nettle | herb | FACW | 2 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Liquidambar styraciflua* | sweet gum | tree | FACW | 4 |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Quercus palustris* | pin oak | tree | FACW | 3 |
| *Smilax rotundifolia* | catbrier | woody vine | FAC | 4 |
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |

*Coefficient of Conservatism (Rothrock 2004)

$FQI = R/\sqrt{N} = 87/\sqrt{25} = 17.4$
$mCv = R/N = 87/25 = 3.5$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 20 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** SE 1/4, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 250 m (820 ft) southwest of Indiana Route 64 and 12.2 m (40 ft) west of Maucks Pond

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Quercus pagoda* | NI | tree |
| 2. *Ulmus americana* | FACW- | tree |
| 3. *Toxicodendron radicans* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Nolin silt loam
On Gibson County hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: X Redox depletions: Yes: No: X
Matrix color: 10YR 5/4
Other indicators: none

**Hydric soils:** Yes: No: X
**Rationale:** Nolin silt loam is a well drained soil that lacks hydric soil characteristics.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 20 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** SE 1/4, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 250 m (820 ft) southwest of Indiana Route 64 and 12.2 m (40 ft) west of Maucks Pond

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.0 m (40 in)
Overview of hydrological flow through the system: This site receives water through precipitation and sheet flow from adjacent higher ground (a levee and an old road embankment). Water leaves the site via evapotranspiration and sheet flow onto nearby lower ground (a wetland outside of the project corridor).
Size of watershed: < 2.6 $km^2$ (1 $mi^2$)
Other field evidence observed: Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee. This site is topographically higher than an adjacent wetland located outside the project corridor.

**Wetland hydrology:** Yes: No: X
**Rationale:** The site is protected from overbank flooding by a levee, and the relatively high topography suggests that any water this site may receive rapidly drains onto adjacent lower ground. In our opinion, this site is not flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. This site does not meet all of the wetland criteria. The NWI codes this site as PSS1A (temporarily flooded, broad-leaved deciduous, scrub-shrub palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 20 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** SE 1/4, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 250 m (820 ft) southwest of Indiana Route 64 and 12.2 m (40 ft) west of Maucks Pond

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer negundo* | box elder | sapling | FACW- | 1 |
| *Acer saccharinum* | silver maple | tree | FACW | 1 |
| *Albizia julibrissin* | mimosa | tree, shrub | UPL | ** |
| *Ampelopsis cordata* | raccoon grape | woody vine | FAC+ | 3 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Bignonia capreolata* | cross-vine | woody vine | FACW | 7 |
| *Boehmeria cylindrica* | false nettle | herb | OBL | 3 |
| *Campsis radicans* | trumpet creeper | shrub, herb | FAC | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carya cordiformis* | bitternut hickory | sapling, shrub | FAC | 5 |
| *Carya illinoensis* | pecan | tree, sapling, shrub | FACW | 4 |
| *Carya laciniosa* | kingnut hickory | sapling | FACW | 8 |
| *Catalpa speciosa* | catalpa | tree, shrub | FACU | 0 |
| *Celtis laevigata* | sugarberry | tree | FACW | 7 |
| *Celtis occidentalis* | hackberry | shrub | FAC- | 3 |
| *Cercis canadensis* | redbud | sapling | FACU | 3 |
| *Cinna arundinacea* | stout woodreed | herb | FACW | 4 |
| *Cirsium discolor* | field thistle | herb | UPL | 3 |
| *Cornus drummondii* | rough-leaved dogwood | shrub | FAC | 2 |
| *Cryptotaenia canadensis* | honewort | herb | FAC | 3 |
| *Diospyros virginiana* | persimmon | tree, shrub | FAC | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium rugosum* | white snakeroot | herb | FACU | 2 |
| *Fraxinus pennsylvanica* | green ash | tree, shrub | FACW | 1 |
| *Geum canadense* | white avens | herb | FAC | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Hackelia virginiana* | stickseed | herb | FAC- | 0 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Impatiens capensis* | jewelweed | herb | FACW | 2 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Juglans nigra* | black walnut | sapling | FACU | 2 |
| *Liquidambar styraciflua* | sweet gum | tree, sapling, shrub | FACW | 4 |
| *Lonicera japonica* | Japanese honeysuckle | woody vine | FACU | ** |
| *Morus rubra* | red mulberry | tree | FAC- | 4 |

Species list continued on the following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 20 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Floodplain Forest
**Legal Description:** SE 1/4, NE 1/4, NW 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 250 m (820 ft) southwest of Indiana Route 64 and 12.2 m (40 ft) west of Maucks Pond

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Parthenocissus quinquefolia* | Virginia creeper | woody vine, herb | FAC- | 2 |
| *Polygonum virginianum* | Virginia knotweed | herb | FAC | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Quercus macrocarpa* | bur oak | tree | FAC- | 5 |
| *Quercus pagoda* | cherrybark oak | tree, sapling | FAC | 5 |
| *Quercus palustris* | pin oak | tree, sapling | FACW | 3 |
| *Quercus shumardii* | Shumard's oak | tree | FACW- | 7 |
| *Quercus velutina* | black oak | tree | UPL | 4 |
| *Rosa multiflora* | multiflora rose | shrub | FACU | ** |
| *Rubus* sp. | blackberry | shrub | ----- | – |
| *Sanicula gregaria* | common snakeroot | herb | FAC+ | 2 |
| *Solidago canadensis* | Canada goldenrod | herb | FACU | 0 |
| *Solidago gigantea* | late goldenrod | herb | FACW | 4 |
| *Symphoricarpos orbiculatus* | coralberry | herb | FACU | 1 |
| *Toxicodendron radicans* | poison ivy | shrub, woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling, shrub | FACW- | 3 |
| *Vernonia gigantea* | tall ironweed | herb | FAC | 2 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 149/\sqrt{49} = 21.3$
$mCv = R/N = 149/49 = 3.0$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 21 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** N 1/2, NE 1/4, Sec. 33, T1S, R12W
**Location:** Maucks Pond, 168 m (550 ft) southwest of Indiana Route 64 and 9.1 m (30 ft) west of 950 W

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| none | | |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 0%

**Hydrophytic vegetation:** Yes: No: X
**Rationale:** This pond does not support rooted-emergent or woody plant species in enough quantity to meet the criterion for dominant hydrophytic vegetation. The few plant species associated with this site occur in a very narrow fringe along its perimeter.

### SOILS

Series and phase: Undetermined (excavated)
On Gibson County hydric soils list?: Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Matrix color: NA
Other hydric soil indicators: None

**Hydric soils:** Yes: No: X
**Rationale:** This site was excavated for a pond. This pond is permanently inundated and does not support rooted emergent or woody vegetation.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 21 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** N 1/2, NE 1/4, Sec. 33, T1S, R12W
**Location:** Maucks Pond, 168 m (550 ft) southwest of Indiana Route 64 and 9.1 m (30 ft) west of 950 W

### HYDROLOGY

Inundated? Yes: X No: Depth of standing water: to approximately 2.4 m (8 ft)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground, and from a ditch and stream that empty into it. Water leaves the site via evapotranspiration.

Size of watershed: < 13 $km^2$ (5 $mi^2$)
Other field evidence observed: This excavated site is lower than surrounding ground. Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation and the relatively low topography indicate that wetland hydrology is present. This site probably is permanently inundated. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** This site is a deepwater aquatic habitat. Although this permanently inundated area is probably less than 6.6 ft mean annual depth, dominant hydrophytic vegetation and soils which support rooted emergent or woody plants are not present. The NWI codes this site as L1UBH (permanently flooded, limnetic, lacustrine system with an unconsolidated bottom).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 21 (page 3 of 3)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** N 1/2, NE 1/4, Sec. 33, T1S, R12W
**Location:** Maucks Pond, 168 m (550 ft) southwest of Indiana Route 64 and 9.1 m (30 ft) west of 950 W

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree, sapling, shrub | FACW | 1 |
| *Asclepias incarnata* | swamp milkweed | herb | OBL | 4 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree, sapling, shrub | FACW | 2 |
| *Bidens connata* | beggar-ticks | herb | OBL | 2 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Chasmanthium latifolium* | sea oats | herb | FACW | 4 |
| *Cyperus acuminatus* | short-point flatsedge | herb | OBL | 2 |
| *Cyperus esculentus* | yellow nutsedge | herb | FACW | 0 |
| *Eleocharis acicularis* | needle spike rush | herb | OBL | 2 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Fimbristylis autumnalis* | autumn sedge | herb | FACW+ | 3 |
| *Forestiera acuminata* | swamp privet | sapling, shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | shrub | FACW | 1 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Juncus tenuis* | path rush | herb | FAC | 0 |
| *Leersia oryzoides* | rice cutgrass | herb | OBL | 2 |
| *Liquidambar styraciflua* | sweet gum | shrub | FACW | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Panicum rigidulum* | munro grass | herb | FACW | 4 |
| *Penthorum sedoides* | ditch stonecrop | herb | OBL | 2 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum* sp. | smartweed | herb | ----- | – |
| *Rorippa sylvestris* | creeping yellow cress | herb | OBL | ** |
| *Salix nigra* | black willow | shrub | OBL | 3 |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Toxicodendron radicans* | poison ivy | herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling, shrub | FACW- | 3 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 69/\sqrt{29} = 12.8$
$mCv = R/N = 69/29 = 2.4$

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 22 (page 1 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, SW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) southwest of Indiana Route 64 and 36.6 m (120 ft) west of 950 W

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Iva annua* | FAC | herb |
| 2. *Panicum rigidulum* | FACW | herb |
| 3. *Panicum virgatum* | FAC+ | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Birds silt loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 2.5Y 5/2
Other indicators: This soil is found in a low area adjacent to a pond.
Note: Some of the surface may have been disturbed due to previous earth moving and scraping activities.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Birds silt loam as having aquic conditions. This soil has iron masses, iron depletions, and an iron depleted matrix. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION
Site 22 (page 2 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, SW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) southwest of Indiana Route 64 and 36.6 m (120 ft) west of 950 W

### HYDROLOGY

Inundated? Yes: No: X Depth of standing water: NA
Depth to saturated soil: > 1.3 m (50 in)
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (a levee and road embankment), and from overflow of the Wabash River and the Patoka River. Water leaves the site via evapotranspiration and sheet flow into the adjacent pond (Site 9).
Size of watershed: 74,165 $km^2$ (28,635 $mi^2$) (Ogata 1975)
Other field evidence observed: This site is located within the floodplain of the Wabash River and is on the river side of a levee. Drift lines and water-borne sediment deposits were observed at this site.

**Wetland hydrology:** Yes: X No:
**Rationale:** The relatively low topography, the close proximity to a major river, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PEMA (temporarily flooded, emergent, palustrine wetland).

Determined by: David Ketzner (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 22 (page 3 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, SW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) southwest of Indiana Route 64 and 36.6 m (120 ft) west of 950 W

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acalypha rhomboidea* | three-seeded mercury | herb | FACU | 0 |
| *Acalypha virginica* | three-seeded mercury | herb | FACU | 0 |
| *Acer saccharinum* | silver maple | herb | FACW | 1 |
| *Amsonia tabernaemontana* | blue star | herb | FACW | 5 |
| *Apocynum cannabinum* | dogbane | herb | FAC | 2 |
| *Asclepias incarnata* | swamp milkweed | herb | OBL | 4 |
| *Asclepias perennis* | swamp white milkweed | herb | OBL | 8 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Aster vimineus* | frost flower | herb | FACW- | 4 |
| *Betula nigra* | river birch | tree, shrub | FACW | 2 |
| *Campsis radicans* | trumpet creeper | herb | FAC | 1 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Carex typhina* | sedge | herb | OBL | 7 |
| *Cephalanthus occidentalis* | buttonbush | shrub | OBL | 5 |
| *Commelina virginica* | day flower | herb | FACW | 6 |
| *Cyperus erythrorhizos* | red-rooted sedge | herb | OBL | 1 |
| *Cyperus strigosus* | straw colored flatsedge | herb | FACW | 0 |
| *Desmodium paniculatum* | panicled tick trefoil | herb | FACU | 2 |
| *Dichanthelium acuminatum* | panic grass | herb | FAC | 2 |
| *Diodia virginiana* | large buttonweed | herb | FACW | 2 |
| *Eleocharis obtusa* | spike rush | herb | OBL | 1 |
| *Elymus virginicus* | Virginia wild rye | herb | FACW- | 3 |
| *Eupatorium serotinum* | late boneset | herb | FAC+ | 0 |
| *Forestiera acuminata* | swamp privet | shrub | OBL | 8 |
| *Fraxinus pennsylvanica* | green ash | shrub, herb | FACW | 1 |
| *Hibiscus laevis* | rose mallow | herb | OBL | 4 |
| *Hypericum mutilum* | dwarf St. Johns-wort | herb | FACW | 4 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Leersia lenticularis* | catchfly grass | herb | OBL | 5 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Lespedeza cuneata* | sericea lespedeza | herb | NI | ** |
| *Lespedeza repens* | creeping bush clover | herb | UPL | 6 |
| *Liquidambar styraciflua* | sweet gum | shrub | FACW | 4 |
| *Ludwigia palustris* | marsh purslane | herb | OBL | 3 |

Species list continued on following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 22 (page 4 of 4)

**Field Investigators:** Ketzner & Keene **Date:** 29 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Meadow
**Legal Description:** SW 1/4, SW 1/4, SE 1/4, SE 1/4, Sec. 28, T1S, R12W
**Location:** Approximately 21.3 m (70 ft) southwest of Indiana Route 64 and 36.6 m (120 ft) west of 950 W

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Lysimachia ciliata* | fringed loosestrife | herb | FACW | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Morus alba* | white mulberry | shrub | FAC | ** |
| *Oxalis stricta* | yellow wood sorrel | herb | FACU | 0 |
| *Panicum rigidulum* | munro grass | herb | FACW | 4 |
| *Panicum virgatum* | prairie switchgrass | herb | FAC+ | 4 |
| *Paspalum pubiflorum* | beadgrass | herb | FACW | 3 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 2 |
| *Physalis subglabrata* | smooth ground cherry | herb | UPL | 0 |
| *Platanus occidentalis* | sycamore | tree, shrub | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum lapathifolium* | curttop lady's thumb | herb | FACW+ | 0 |
| *Polygonum pensylvanicum* | common smartweed | herb | FACW+ | 0 |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Polygonum ramosissimum* | bushy knotweed | herb | FAC- | 4 |
| *Populus deltoides* | eastern cottonwood | shrub, herb | FAC+ | 1 |
| *Quercus palustris* | pin oak | shrub | FACW | 3 |
| *Rorippa sylvestris* | creeping yellow cress | herb | OBL | ** |
| *Salix nigra* | black willow | shrub | OBL | 3 |
| *Schizachyrium scoparium* | little bluestem | herb | FACU- | 4 |
| *Setaria faberi* | giant foxtail | herb | FACU+ | ** |
| *Setaria glauca* | yellow foxtail | herb | FAC | ** |
| *Solanum carolinense* | horse-nettle | herb | FACU- | 0 |
| *Sorghum halepense* | Johnson grass | herb | FACU | ** |
| *Spermacoce glabra* | smooth buttonweed | herb | FACW+ | 3 |
| *Toxicodendron radicans* | poison ivy | herb | FAC+ | 1 |
| *Ulmus americana* | American elm | herb | FACW- | 3 |
| *Vitis cinerea* | winter grape | woody vine | FACW- | 4 |
| *Vitis riparia* | riverbank grape | woody vine | FACW- | 1 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 157/√56 = 21.0
mCv = R/N = 157/56 = 2.8

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 23 (page 1 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NE 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 13.7 m (45 ft) northeast of Indiana Route 64 and 9.1 m (30 ft) east of 950 W

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| Dominant Plant Species | Indicator Status | Stratum |
|---|---|---|
| 1. *Acer saccharinum* | FACW | tree |
| 2. *Fraxinus pennsylvanica* | FACW | tree |
| 3. *Quercus palustris* | FACW | tree |
| 4. *Quercus palustris* | FACW | sapling |
| 5. *Fraxinus pennsylvanica* | FACW | shrub |
| 6. *Carex muskingumensis* | OBL | herb |
| 7. *Carex typhina* | OBL | herb |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

**Hydrophytic vegetation:** Yes: X No:
**Rationale:** More than 50% of the dominants are OBL, FACW, FAC+ or FAC.

### SOILS

Series and phase: Vincennes loam
On Gibson County hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: X No: Redox depletions: Yes: X No:
Matrix color: 10YR 5/1
Other indicators: This soil is found in a level to depressional area.

**Hydric soils:** Yes: X No:
**Rationale:** The Natural Resources Conservation Service classifies Vincennes loam as having aquic conditions. This soil has iron masses, an iron depleted matrix, and is found in a low-lying area. These characteristics are evidence of a hydric soil.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 23 (page 2 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NE 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 13.7 m (45 ft) northeast of Indiana Route 64 and 9.1 m (30 ft) east of 950 W

### HYDROLOGY

Inundated? Yes: X No: Depth of standing water: to 0.10 m (4 in)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation, sheet flow from adjacent higher ground (a small berm and the road embankment), and from overflow of a ditch between this site and Indiana Route 64. Water leaves the site via evapotranspiration and possibly from sheet flow into the adjacent ditch.
Size of watershed: < 2.6 $km^2$ (1 $mi^2$)
Other field evidence observed: Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee. A small berm encloses this triangular site on two sides, and the road embankment along the third side. The berm holds water within this site. The ditch appears to mostly add water to the site as it overflows, and probably rarely aids its drainage.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation, the relatively low topography, and other field evidence indicate that wetland hydrology is present. In our opinion, this site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: X No:
**Rationale for decision:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. This site meets all of the wetland criteria. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested palustrine wetland).

Determined by: David Ketzner and Brian Wilm (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 23 (page 3 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NE 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 13.7 m (45 ft) northeast of Indiana Route 64 and 9.1 m (30 ft) east of 950 W

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | tree | FACW | 1 |
| *Alisma plantago-aquatica* | broad-leaf water-plantain | herb | OBL | 2 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Betula nigra* | river birch | tree | FACW | 2 |
| *Bidens connata* | beggar-ticks | herb | OBL | 2 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Carex grayi* | bur sedge | herb | FACW+ | 5 |
| *Carex hyalinolepis* | sedge | herb | OBL | 3 |
| *Carex muskingumensis* | sedge | herb | OBL | 6 |
| *Carex typhina* | sedge | herb | OBL | 7 |
| *Carya laciniosa* | kingnut hickory | shrub | FACW | 8 |
| *Catalpa speciosa* | catalpa | tree | FACU | 0 |
| *Celtis laevigata* | sugarberry | tree, sapling | FACW | 7 |
| *Diospyros virginiana* | persimmon | tree | FAC | 2 |
| *Echinochloa muricata* | barnyard grass | herb | OBL | 1 |
| *Fraxinus pennsylvanica* | green ash | tree, sapling, shrub | FACW | 1 |
| *Gleditsia triacanthos* | honey locust | tree | FAC | 1 |
| *Ilex decidua* | swamp holly | shrub | FACW | 6 |
| *Ipomoea pandurata* | wild sweet potato vine | herb | FACU | 3 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Leersia lenticularis* | catchfly grass | herb | OBL | 5 |
| *Leersia virginica* | white grass | herb | FACW | 4 |
| *Liquidambar styraciflua* | sweet gum | tree, sapling, shrub | FACW | 4 |
| *Lysimachia nummularia* | moneywort | herb | FACW+ | ** |
| *Menispermum canadense* | moonseed | herb | FAC | 3 |
| *Penthorum sedoides* | ditch stonecrop | herb | OBL | 2 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 2 |
| *Platanus occidentalis* | sycamore | tree | FACW | 3 |
| *Polygonum cespitosum* | creeping smartweed | herb | UPL | ** |
| *Polygonum punctatum* | dotted smartweed | herb | OBL | 3 |
| *Populus deltoides* | eastern cottonwood | tree | FAC+ | 1 |
| *Quercus pagoda* | cherrybark oak | tree | FAC | 5 |
| *Quercus palustris* | pin oak | tree, sapling, shrub | FACW | 3 |
| *Sium suave* | water parsnip | herb | OBL | 5 |

Species list continued on following page.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 23 (page 4 of 4)

**Field Investigators:** Ketzner, Keene & Wilm **Date:** 22 July 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Wet Floodplain Forest
**Legal Description:** N 1/2, NE 1/4, NE 1/4, NE 1/4, Sec. 33, T1S, R12W
**Location:** Approximately 13.7 m (45 ft) northeast of Indiana Route 64 and 9.1 m (30 ft) east of 950 W

### SPECIES LIST (continued)

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Toxicodendron radicans* | poison ivy | woody vine, herb | FAC+ | 1 |
| *Ulmus americana* | American elm | tree, sapling | FACW- | 3 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

FQI = R/√N = 105/√34 = 18.0
mCv = R/N = 105/34 = 3.1

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 24 (page 1 of 3)

**Field Investigators:** Ketzner, Keene & Larimore **Date:** 4 August 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NE 1/4, Sec. 33 and N 1/2, NW 1/4, NW 1/4, Sec. 34, T1S, R12W
**Location:** 41.1 m (135 ft) northeast of Indiana Route 64 and 152 m (500 ft) east of 950 W

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

### VEGETATION

| **Dominant Plant Species** | **Indicator Status** | **Stratum** |
|---|---|---|
| none | | |

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 0%

**Hydrophytic vegetation:** Yes: No: X
**Rationale:** This pond does not support rooted-emergent or woody plant species in enough quantity to meet the criterion for dominant hydrophytic vegetation. The few plant species associated with this site occur in a very narrow fringe along its perimeter.

### SOILS

Series and phase: Undetermined (excavated)
On Gibson County hydric soils list?: Yes: No: X
Is the soil a histosol? Yes: No: X Histic epipedon present? Yes: No: X
Redox concentrations: Yes: No: Undetermined: X
Redox depletions: Yes: No: Undetermined: X
Matrix color: NA
Other hydric soil indicators: None

**Hydric soils:** Yes: No: X
**Rationale:** This site was excavated for a pond. This pond is permanently inundated and does not support rooted emergent or woody vegetation.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 24 (page 2 of 3)

**Field Investigators:** Ketzner, Keene & Larimore **Date:** 4 August 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NE 1/4, Sec. 33 and N 1/2, NW 1/4, NW 1/4, Sec. 34, T1S, R12W
**Location:** 41.1 m (135 ft) northeast of Indiana Route 64 and 152 m (500 ft) east of 950 W

### HYDROLOGY

Inundated? Yes: X No: Depth of standing water: > 3.0 m (10 ft)
Depth to saturated soil: at surface
Overview of hydrological flow through the system: This site receives water through precipitation and sheet flow from adjacent higher ground. Water leaves the site via evapotranspiration.
Size of watershed: < 2.6 $km^2$ (1 $mi^2$)
Other field evidence observed: This excavated site is lower than surrounding ground. Although this site is within the floodplain of the Wabash River, it is currently protected from overbank flooding by a levee.

**Wetland hydrology:** Yes: X No:
**Rationale:** The visual observation of inundation and saturation and the relatively low topography indicate that wetland hydrology is present. This site is permanently inundated. In our opinion, this excavated site is flooded or saturated long enough to meet the wetland hydrology criterion.

### DETERMINATION AND RATIONALE:

**Is the site a wetland?** Yes: No: X
**Rationale for decision:** This site is a deepwater aquatic habitat that is permanently inundated at mean water depths of > 6.6 feet. Dominant hydrophytic vegetation and soils which support rooted emergent or woody plants are not present. The NWI codes this site as PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom).

Determined by: David Ketzner and Rick Larimore (vegetation and hydrology)
Dennis Keene (soils and hydrology)
Illinois Natural History Survey
Center for Wildlife and Plant Ecology
607 East Peabody Drive
Champaign, Illinois 61820
217-244-8821 (Ketzner)

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 24 (page 3 of 3)

**Field Investigators:** Ketzner, Keene & Larimore **Date:** 4 August 2004
**Project Name:** FAP 827 (IL 15) - New Crossing of the Wabash River
**State:** Indiana **County:** Gibson
**Applicant:** IDOT District 7 **Site Name:** Pond
**Legal Description:** NE 1/4, NE 1/4, NE 1/4, NE 1/4, Sec. 33 and N 1/2, NW 1/4, NW 1/4, Sec. 34, T1S, R12W
**Location:** 41.1 m (135 ft) northeast of Indiana Route 64 and 152 m (500 ft) east of 950 W

### SPECIES LIST

| Scientific name | Common name | Stratum | Wetland indicator status | C* |
|---|---|---|---|---|
| *Acer saccharinum* | silver maple | herb | FACW | 1 |
| *Ambrosia artemisiifolia* | common ragweed | herb | FACU | 0 |
| *Aster ontarionis* | Ontario aster | herb | FAC | 5 |
| *Aster simplex* | panicled aster | herb | FACW | 3 |
| *Bidens connata* | beggar-ticks | herb | OBL | 2 |
| *Bidens frondosa* | common beggar-ticks | herb | FACW | 1 |
| *Carex tribuloides* | sedge | herb | FACW+ | 5 |
| *Cuscuta* sp. | dodder | herb | —— | – |
| *Cyperus esculentus* | yellow nutsedge | herb | FACW | 0 |
| *Cyperus strigosus* | straw colored flatsedge | herb | FACW | 0 |
| *Echinochloa muricata* | barnyard grass | herb | OBL | 1 |
| *Eleocharis obtusa* | spike rush | herb | OBL | 1 |
| *Fraxinus pennsylvanica* | green ash | herb | FACW | 1 |
| *Iva annua* | marsh elder | herb | FAC | 0 |
| *Juncus acuminatus* | knotty-leaved rush | herb | OBL | 4 |
| *Juncus interior* | inland rush | herb | FAC+ | 3 |
| *Kummerowia striata* | Japanese lespedeza | herb | FACU | ** |
| *Leersia oryzoides* | rice cutgrass | herb | OBL | 2 |
| *Lycopus americanus* | common water horehound | herb | OBL | 3 |
| *Paspalum laeve* | bead grass | herb | UPL | 2 |
| *Phyla lanceolata* | fog-fruit | herb | OBL | 2 |
| *Populus deltoides* | eastern cottonwood | herb | FAC+ | 1 |
| *Salix exigua* | sandbar willow | shrub, herb | OBL | 1 |
| *Salix nigra* | black willow | shrub, herb | OBL | 3 |
| *Solidago canadensis* | Canada goldenrod | herb | FACU | 0 |
| *Ulmus americana* | American elm | herb | FACW- | 3 |

*Coefficient of Conservatism (Rothrock 2004)
**Non-native species

$FQI = R/\sqrt{N} = 44/\sqrt{24} = 9.0$
$mCv = R/N = 44/24 = 1.8$

ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES

ILLINOIS
NATURAL
HISTORY
SURVEY



26 October 2004

Mr. Tom Brooks
Illinois Department of Transportation
Bureau of Design & Environment
2300 South Dirksen Parkway
Springfield, IL 62764

Dear Tom:

Enclosed is the NRCS wetland inventory map for FAP 827 (IL 15) in Wabash County, along with a copy of a letter from Mr. Brandon Rhinehart. This map shows the extent of Wetland Site 2, as determined by the NRCS. This information should have been included with the report recently submitted. However, I neglected to enclose this information when I mailed the report to you. Please contact Allen Plocher or me if you have questions regarding this project. Thank you.

Sincerely,

David M. Ketzner

David M. Ketzner

607 East Peabody Drive, Champaign, Illinois 61820-6970 USA
(217) 333-6880 Fax (217) 333-4949
http://www.inhs.uiuc.edu

Wabash County Soil and Water Conservation District
219 West 9th Street
Mount Carmel, IL 62863
Phone: 618/262-4962 Ext. 3 Fax: 618/262-7462

E-mail: colleen.kensler@il.nacdnet.net
brandon.rhinehart@il.nacdnet.net

Dear Mr. Ketzner,

Enclosed are two aerial maps of NRCS wetland inventory maps. If you need more information, you can call 618-262-4962 ext. 3 or e-mail me at brandon.rhinehart@il.nacdnet.net.

Brandon Rhinehart
Resource Conservationist

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# Appendix V